

## CLAIMS

What is claimed is:

1. A system for initializing a data processing system, comprising:
- a plurality of parameter registers;
- a user-defined initialization input defining a first set of initialization data utilized for initializing said data processing system;
- a serial non-volatile memory, coupled to said plurality of parameter registers, said serial non-volatile memory utilized for storing a second set of initialization data utilized for initializing said data processing system;
- a parallel non-volatile memory, coupled to said plurality of parameter registers, said parallel non-volatile memory utilized for storing a third set of initialization data utilized for initializing said data processing system; and
- a multiplexor interposed between said parameter registers and said user-defined initialization input, said serial non-volatile memory, and said parallel non-volatile memory for determining a selection from said user-defined initialization input, said serial non-volatile memory, and said parallel non-volatile memory and relaying said selection to said plurality of parameter registers, in response to a control signal.
2. The system for initializing a data processing system according to claim 1, further including a set of control resistors coupled to a user-defined control input, wherein said set of control resistors outputs said control signal in response to said user-defined control input.

1           3.       The system for initializing a data processing system according to claim 1, further  
2           including a set of initialization resistors coupled to a user-defined initialization input,  
3           wherein said set of initialization resistors outputs an initialization signal, in response to  
4           said user-defined initialization input.

1           4.       The system for initializing a data processing system according to claim 1, further  
2           including a command decoder is interposed between said multiplexor and said processor  
3           and said parallel non-volatile memory, said command decoder is utilized for filtering  
4           commands issued from said processor for a set of desired commands.

5           5.       The system for initializing a data processing system according to claim 1, further  
            including a serial non-volatile memory controller is interposed between said serial non-  
            volatile memory and said multiplexor, said serial non-volatile memory controller is  
            utilized for controlling data sent from serial non-volatile memory.

6           6.       The system for initializing a data processing system according to claim 1, further  
            including a parallel non-volatile memory controller is interposed between said parallel  
            non-volatile memory and said command decoder, said parallel non-volatile memory  
            controller is utilized for controlling data sent from parallel non-volatile memory.

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1           7.     A data processing system, comprising:

2                   a processor;

3                   a memory, coupled to said processor; and

4                   a system for initializing a data processing system, comprising:

5                         a plurality of parameter registers;

6                         a user-defined initialization input defining a first set of initialization data  
7                         utilized for initializing said data processing system;

8                         a serial non-volatile memory, coupled to said plurality of parameter  
9                         registers, said serial non-volatile memory utilized for storing a second set of  
10                         initialization data utilized for initializing said data processing system;

11                         a parallel non-volatile memory, coupled to said plurality of parameter  
12                         registers, said parallel non-volatile memory utilized for storing a third set of  
13                         initialization data utilized for initializing said data processing system; and

14                         a multiplexor interposed between said parameter registers and said user-  
15                         defined initialization input, said serial non-volatile memory, and said parallel  
16                         non-volatile memory for determining a selection from said user-defined  
17                         initialization input, said serial non-volatile memory, and said parallel non-volatile  
18                         memory and relaying said selection to said plurality of parameter registers, in  
19                         response to a control signal.

1           8.     A host data processing system, comprising:

2                     an integrated circuit in which a data processing system in accordance with claim  
3     7 is fabricated;

4                     an interconnect coupled to said integrated circuit;

5                     a host processor; and

6                     a host memory.

7           9.     A method of initializing a data processing system, comprising:

8                     sending a control signal to a multiplexor, said control signal designating one of  
9     a plurality of sets of initialization data as a preferred set of initialization data;

10                    relaying said preferred set of initialization data to a plurality of parameter  
11    registers; and

12                    utilizing said preferred set of initialization data stored in said plurality of  
13    parameter registers to initialize said data processing system.

14           10.    The method of initializing a data processing system according to claim 9, further  
15    including:

16                    generating a signal, by a user, from a user-defined control input to send said  
17    control signal to said multiplexor.

1 11. The method of initializing a data processing system according to claim 9, further  
2 including:

3 filtering commands by a command decoder, said commands issued from a  
4 processor, in response to designating a set of initialization data stored in a parallel non-  
5 volatile memory as said preferred set of initialization data.

1 12. The method of initializing a data processing system according to claim 9, further  
including:

designating a initialization signal sent from a n initialization input as said  
preferred set of initialization data, in response to selecting a first option by said control  
signal.

13. The method of initializing a data processing system according to claim 9, further  
including:

3 designating a set of initialization data stored in a serial non-volatile memory as  
4 said preferred set of initialization data, in response to selecting a second option by said  
5 control signal.

1 14. The method of initializing a data processing system according to claim 9, further  
2 including:

3 designating a set of initialization data stored in a parallel non-volatile memory as  
4 said preferred set of initialization data, in response to selecting a third option by said  
5 control signal.